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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,653	02/07/2006	Harald Guenschel	10191/4192	7204
26646	7590	02/22/2008		
KENYON & KENYON LLP ONE BROADWAY NEW YORK, NY 10004			EXAMINER PHAN, THIEM D	
			ART UNIT 3729	PAPER NUMBER
			MAIL DATE 02/22/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/540,653	GUENSCHER ET AL.	
	Examiner	Art Unit	
	THIEM PHAN	3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 15-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/23/05, 8/20/07</u>  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Specification***

1. On page 1, before "FIELD OF THE INVENTION", insert:

"CROSS-REFERENCE TO RELATED APPLICATION

This application is the National Phase Patent Application of International Application Number PCT/DE03/03800, filed on November 17, 2003, which claims priority to Germany Patent Application Number 102 60 852.0, filed December 23, 2002."

### ***Information Disclosure Statement***

2. The information disclosure statement filed 6/23/05, where some of the references are crossed over, fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shier (US 4,782,320).

**With regard to claims 15 and 19**, Shier teaches a method for selecting a resistance value in a network (Col. 2, lines 1-3), including the:

- adjusting the electrical resistance to a specified value or resistor network value (Fig. 1, 10) at which the resistor run (Fig. 1, R1-R17) is produced so as to have a lower resistance with reference to the specified value (Col. 4, lines 40-43), wherein the resistor run includes burn-up segments (Fig. 1, between N1 & N2) and bridging meandering windings or meshes (Fig. 1, R1-R17 & N1-N12 of 16), wherein the adjusting is undertaken by cutting open selected ones of the burn-up segments (Col. 4, lines 44-47); and
- cutting of the metal shorts of the resistive link by sending energy-controlled current pulses to the metal shorts (Col. 1, line 63) and the cutting of the burn-up segments by laser (Col. 3, lines 27-30; col. 1, line 63; col. 4, lines 44-47) through the burn-up segments; except for cutting/opening the burn-up segments by energy-controlled current pulses.

It would be obvious to one of ordinary skill in the art at the time the invention was made to apply the cutting of the burn-up segments by electrical current pulses in addition to the laser network-trimming and heating in order to speed up the cutting process.

**With regard to claim 16**, Shier teaches that the burn-up segments are situated so that at least for a part of the meandering windings or meshes (Fig. 1, N1-N4-N5-N2 of 16), one of the burn-up segments (Fig. 1, R1) is connected in parallel to each of the meandering windings.

**With regard to claim 17**, Shier teaches that one of the burn-up segments (Fig. 1, between N1 & N2) is connected to one of two connecting circuit traces (Fig. 1, N1) that are routed to two ends (Fig. 1, 14) of the resistor run; and for cutting open a selected burn-up segment, the selected burn-up segment is heated due to Joule effect and the current pulse (Col. 3, lines 27-30; col. 1, line 63) is injected into the connecting circuit traces of the resistor run.

**With regard to claim 18**, Shier teaches that at least one first burn-up segment (Fig. 1, between N1 & N2) is connected to one of two connecting circuit traces (Fig. 1, N1 & N2) that are routed to two ends (Fig. 1, 14) of the resistor run and at least one last burn-up segment (Fig. 1, between N3 & N2) is connected to an additional circuit trace (Fig. 1, N3), and wherein to cut open the selected burn-up segment by heating it due to Joule effect by injecting the current pulse (Col. 3, lines 27-30; col. 1, line 63) between the connecting circuit trace and the additional circuit trace.

**With regard to claim 20**, Shier teaches that the circuit traces are routed to connecting locations of the burn-up segments and the meandering windings, and wherein for cutting open a burn-up segment, the current pulse is injected into the two circuit traces (Fig. 1, N1 & N2) that are routed to a selected burn-up segment (Col. 3, lines 27-30; col. 1, line 63; col. 4, lines 44-47).

**With regard to claim 21**, Shier teaches that the current for burning the resistor segments are of controlled pulse (Col. 3, lines 27-30; col. 1, line 63; col. 4, lines 44-47).

5. Claims 22 and 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shier in view of Kato (US 5,844,122).

**With regard to claim 22**, Shier teaches a method for selecting a resistance value in a network including the teaching of the cutting by laser and electric current pulse (Col. 3, lines 27-30; col. 1, line 63; col. 4, lines 44-47), which reads on applicants' claimed invention; except for monitoring the voltage falling off at a selected burn-up segment when a more than proportional voltage increase is detected in order to switch off the current pulse.

Kato teaches the sensing of the current/voltage output across the resistor to be trimmed ((Fig. 3, 23 & 24; col. 3, lines 42-45).

It would be obvious to one of ordinary skill in the art at the time the invention was made to apply the voltage sensor, as taught by Kato to the method for selecting a resistance value in a network with the teaching obviousness of the combined cutting by laser and electric current pulse of the resistor in order to save energy by turning off the cutting by laser and electric current pulse, once the resistor is cut and it spikes the voltage output for sensing and recognition.

**With regard to claims 24-28**, Shier in view of Kato teach a method for selecting a resistance value in a network including the teaching of the cutting by laser and electric current pulse (Col. 3, lines 27-30; col. 1, line 63; col. 4, lines 44-47), which reads on applicants' claimed invention; except for having different structure of a resistor run such as the cutout on the cover layer, the cut off of connecting circuit traces ends region, the narrow size of the burn-up segments and their waist-shaped and the cavity in the cover layer of the resistor run.

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have the structure of a resistor run such as the cutout on the cover layer, the cut off of connecting circuit traces ends

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region, the narrow size of the burn-up segments and their waist-shaped and the cavity in the cover layer of the resistor run because applicants have not disclose that the "structure of a resistor run such a the cutout on the cover layer, the cut off of connecting circuit traces ends region, the narrow size of the burn-up segments and their waist-shaped and the cavity in the cover layer of the resistor run" provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with a structure for a resistor run of a sensor (Kato; Fig. 1) because it insulates the sensor resistor (Fig. 1, 2) while providing contacting pads (Fig. 1, 15 & 17) as well.

Therefore, it would have been an obvious matter of design choice to modify Shier in view of Kato to obtain the invention as specified in Claims 24-28.

6. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shier in view of Moriyasu (US 3,639,785).

Shier teaches a method for selecting a resistance value in a network including the use/connection of current pulse to cut (Col. 1, line 63), which reads on applicants' claimed invention; except for using an electronic switch to connect the current pulse to the circuit traces.

Moriyasu teaches a pulse generator with current switches triggered (Fig. 1, 10, 12, 14 & 16; col. 1, lines 34-38, lines 60-66) to obtain desired pulse shaping with high switching rates at increased power output.

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It would be obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Shier by applying the pulse generator with current switches triggered as current pulse connection, as taught by Moriyasu, in order to obtain desired pulse shaping with high switching rates at increased power output.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Phan whose telephone number is 571-272-4568.

The

examiner can normally be reached on M & Tu, 6AM - 2PM, and W & Th, 9AM – 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished



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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/THIEM PHAN/

Tim Phan  
Examiner  
Art Unit 3729

tp  
February 14, 2008